AMENDMENT UNDER 37 C.F.R. § 1.116
EXPEDITED PROCEDURE
GROUP 2871
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Toshihiko ARIYOSHI, et al.

Docket No: Q68880

Appln. No.: 10/092,449

Group Art Unit: 2871

Confirmation No.: 1421

Examiner: Richard H. KIM

Filed: March 08, 2002

For: REFLECTION TYPE LIQUID-CRYSTAL DISPLAY APPARATUS

REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.116

MAIL STOP AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated October 27, 2003, along with a Petition for Extension of Time and appropriate fee, reconsideration and allowance of the subject application are respectfully requested. Upon entry of this Request, claims 1, 2 and 4-8 are pending in the application. Applicant respectfully submits that the pending claims define patentable subject matter.

Claims 1, 2, 7 and 8 and are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bao et al. (U.S. Patent No. 6,266,108; hereafter "Bao") in view of Mamiya et al. (U.S. Patent No. 5,764,332; hereafter "Mamiya") and Mashino et al. (U.S. Patent No. 5,886,759; hereafter "Mashino"). Claims 4-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bao in

view of Mamiya, Mashino and Sanai et al. (U.S. Patent No. 5,029,045; hereafter "Sanai"). Applicant respectfully traverses the prior art rejections.

As set forth in the Amendment filed August 7, 2003, Applicant respectfully submits that that the claimed invention would not have been rendered obvious in view of Bao, Mamiya, Mashino and Sanai, alone or in combination, because the cited references do not teach or suggest "an end portion of said upper substrate is protruded more than a corresponding end portion of said lower substrate so that said light source is disposed on said protruded end surface of said upper substrate", as required by independent claim 1. Rather, Mamiya (which the Examiner cites for disclosing this feature of the claimed invention) teaches that an end portion of the lower (cell-side) substrate 122 protrudes more than a corresponding end portion of the upper (array-side) substrate 120 wherein the light source 114 is disposed on the protruded end surface of the lower (cell-side) substrate 122 and the light guiding sheet 1. That is, in Figures 8 and 9 of Mamiya, the cell-side substrate 122 (which protrudes more that the array-side substrate 120) corresponds to the claimed lower substrate and the array-side substrate 120 corresponds to the claimed upper substrate.[1]

[1] Claim 1 requires "a liquid-crystal display device including a lower substrate provided with a reflection plate, an upper substrate provided with a transparent film on which a light-reflecting element is provided for reflecting transmitted light toward the lower substrate side, and liquid crystal held between said lower substrate and said upper substrate, said light source being disposed at an end surface of said upper substrate, said liquid-crystal display device being configured so that light incident onto a surface of said upper substrate opposite to a contact surface of said upper substrate with said liquid crystal is reflected by said reflection plate of said lower substrate so as to exit from said surface of said upper substrate opposite to said contact surface of said upper substrate with said liquid crystal".

In response to the arguments for patentability, the Examiner (pages 3 and 4 of the Office Action) asserts that "it would have been obvious .... to have the end portion of the upper substrate protruded more than a corresponding end portion of the lower substrate so that the light source is disposed on the protruded end surface of the upper substrate in order to have the light source in close proximity to the transparent film, thereby allowing light to be transmitted through the file while minimizing coupling loss." In support of his position, the Examiner (pages 6 and 7 of the Office Action) asserts "that whether the upper substrate is longer than the lower substrate or vice versa, typically the substrate with the light source is longer than the other one, as evident i[n] Fukiharu (US 6,603,519 B2) ..., and distinguishing between the two is obvious."

In order to be directed to unpatentable (i.e., obvious) subject matter, either (1) the references must expressly or impliedly suggest the claimed combination, or (2) the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in the light of the teachings of the references. Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to modify the display device of Bao based on the teachings of the other cited references or the knowledge generally available to one of ordinary skill in the art, so that an end portion of the upper substrate is protruded more than a corresponding end portion of the lower substrate.

Firstly, Applicant respectfully submits that the Examiner has mischaracterized the teaching of Fukiharu. In particular, Fukiharu does <u>not</u> teach or suggest that that the upper substrate of the liquid crystal display protrudes further than the lower substrate of the liquid crystal display (or vice versa), as the Examiner alleges. Rather, Figure 5 of Fukiharu shows a

front lighting unit 100 includes a light conductive member 101 and a light source 105 disposed on a side surface of the light conductive member 101, wherein the light conductive member 101 is longer than (protrudes from) a liquid crystal panel 401 (which includes substrates not specifically shown) on which the light conductive member 101 is disposed. That is, nowhere does Fukiharu disclose that the one of the substrates of the liquid crystal panel protrudes from the liquid crystal panel, or that the light source is disposed on one of the substrates of the liquid crystal panel, as alleged by the Examiner.

Thus, the Examiner's assertion that "typically the substrate with the light source is longer than the other one" is unsupported by Fukiharu and the prior art of record.

In addition to the Examiner's improper characterization of the teachings of Fukiharu, Applicant respectfully submit that the Examiner's statement on page 4 of the Office action regarding the alleged motivation for modifying the display device of Bao is incorrect since protruding an end portion of the upper substrate which more than a corresponding end portion of the lower substrate would not necessarily facilitate placement of the light source in closer proximity to the upper substrate or minimize coupling loss as compared to the case where the end portion of the upper substrate is aligned with the corresponding end portion of the lower substrate. That is, whether an end portion of a substrate is protruded or aligned with respect to another substrate has no bearing on how close the light source can placed with regard to the substrate.

It is well settled, the characterization of certain limitations or parameters as obvious does not make the claimed invention, considered as a whole, obvious. It is also incumbent upon the

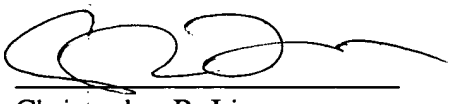
Examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This burden can only be satisfied by an objective teaching in the prior art or by cogent reasoning that the knowledge is available to one of ordinary skill in the art. See *In re Lalu*, (747 F.2d 703, 223 U.S.P.Q. 1257 (Fed. Cir. 1984)). Furthermore, an Examiner may not rely on official or judicial notice at the exact point where patentable novelty is argued, but must come forward with pertinent prior art. See *Ex parte Cady*, 148 U.S.P.Q. 162 (Pat. Off. Bd. App. and Inter. 1965).

Accordingly, Applicant respectfully submits that independent claim 1, as well as dependent claims 2 and 4-8, should be allowable because the cited references, alone or in combination, do not teach or suggest all of the features of the claims, and one of ordinary skill in the art would not have motivated to combine and modify the reference teachings to produce the claimed invention..

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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